THE "ONE-LETTER" RULE FOR GENERIC NAMES IN ZOOLOGY

RULES of nomenclature as they affect scientific names in zoology would no doubt serve their real purpose best and give more general satisfaction if used, not in an absolute sense, but with discretion. But there are those to whom a rule is a rule to be rigidly applied, and the results are such that the question is raised whether if we must abide by rules, we cannot have better ones. A nomenclatorial rule used by the American Ornithologists' Union has raised this question in the mind of the writer, and attention is here called to it, not in a controversial way, but merely to insure that the other side of the case is presented. If such questions are ever taken up again by an International Commission it is desirable that data and opinions on the vexed points be available for consideration. In the recently published[1] "Seventeenth Supplement to the American Ornithologists' Union Check List of North American Birds," prepared by the Committee on Nomenclature, we find the following statements relating to certain generic names:

Oxyura Bonaparte 1828 is considered preoccupied by *Oxyurus* Swainson 1827 (p. 446).

Nyctala Brehm, from whatever date taken, is preoccupied by *Nyctalus* Bowditch 1825, and *Ægolius* Kaup, 1829, is preoccupied by *Ægolia* Billberg, 1820 (p. 447).

Bucephala Baird 1858 is preoccupied by *Bucephalus* Baer 1827 (p. 446).

Dendrocopos Koch, July, 1876, is preoccupied by *Dendrocopus* Vieillot, April, 1876 (p. 448).

But

Heteroscelus Baird 1858 is not invalidated by *Heteroscelis* Latreille 1825 (p. 443).

Tyto Billberg (1828) is not preoccupied by *Tyta* Billberg (1820) (p. 447).

and

Moris Leach . . . adopted because considered neither a *nomen nudum* nor preoccupied by *Morum* Bolten, although *Morus* Vieillot . . . having a termination differing merely in grammatical gender from *Morum* Bolten is thereby invalidated (p. 441).

[1] *The Auk*, Vol. 37, No. 3, July, 1920, pp. 439–449.

Even the experienced taxonomist might be greatly puzzled by this collection of apparently inconsistent assertions, did he not turn to the Code of Nomenclature of the American Ornithologists' Union (1908 Edition) and find the following explanatory remark under Canon XXX:

> Generic and specific names . . . are to be considered identical . . . whether the ending is masculine, feminine or neuter or in Greek or Latin form.

In the principal codes of zoological nomenclature the practise called for by this rule is sanctioned only by that of the American Ornithologists' Union. The parent (we may say) of the A. O. U. Code, namely the Stricklandian Code, in so far as it touches on the point, would seem to accept very similar generic names, even those differing by only one letter. Section 10[2] says

> A name should be changed which has before been proposed for some other genus in zoology or botany.

This section is further elaborated as follows:

> By Rule 10 it was laid down, that when a name is introduced which is identical with one previously used, the latter one should be changed. Some authors have extended the same principle to cases where the later name, when correctly written, only approaches in form, without wholly coinciding with the earlier. We do not, however, think it advisable to make this law imperative, first, because of the vast extent of our nomenclature, which renders it highly difficult to find a name which shall not bear more or less resemblance in sound to some other;[3] and, secondly, because of the impossibility of fixing a limit to the degree of approximation beyond which such a law should cease to operate. We content ourselves, therefore, with putting forth this proposition merely as a recommendation to naturalists, in selecting generic names, to avoid such as too closely approximate words already adopted (p. 118).

These provisions were adopted (with a reservation as to botanical names) by the British Association for the Advancement of Science in 1865 as part of a code which more than any other guided the course of subsequent nomenclature practice.

[2] Rep. British A. A. S., 1842 (1843), p. 113.

[3] If this was true in 1842, how much more difficult the situation must be now after 80 additional years of taxonomic activity.

In Dall's "Discussion of the Subject of Nomenclature" of 1877 which was based on a circular responded to by 45 American naturalists in addition to previous codes and other publications on the subject, the point under consideration receives the following attention in Section 65, Paragraph 10,

> When a name is identical, when properly spelled according to a derivation given by its author, with a prior valid name in the same kingdom it must be rejected.[4]

In other words, if names are not *identical* they stand.

The Entomological Code (1912, Paragraph 82) has this to say on the subject:

> A generic or subgeneric name is a homonym and subject to replacement when it is spelled exactly like a previous valid generic or subgeneric name, letter for letter. However, I and J, and Eu and Ev at the beginning of a name are considered the same, and other words that are equivalent in established Latin usage.

In extracts from a code of Nomenclature in Ichthyology (Jordan, Evermann and Gilbert) published in the Condor in 1905, Canon XVII (Second paragraph), is quoted as follows:

> As a name is a word without necessary meaning, and as the names are identified by their orthography, a generic name (typographical errors corrected) is distinct from all others not spelled in exactly the same way. Questions of etymology are not pertinent in case of adoption or rejection of names deemed preoccupied. (Note.) This canon prohibits change of names because prior names of similar sound or etymology exist. It permits the use of generic names of like origin but of different genders or termination to remain tenable.

The International Code which, so far as it goes, is adhered to by a majority of zoologists, alludes to this subject in a recommendation under article 36. The language follows:

> It is well to avoid the introduction of new generic names which differ from generic names already in use only in termination or in a slight variation in spelling which might lead to confusion. But when once introduced, such names are not to be rejected on this account.

[4] Nomenclature in Zoology and Botany, Salem, Mass., December, 1877, p. 49.

Opinions 25 and 34 of the International Commission support the wording of the foregoing recommendation which is referred to in the opinions as an effective part of the code.

Thus zoological codes in general support the so-called "one-letter rule." The point in this connection that appeals to the present writer with special force is that there would seem to be no good defense for the practise of rejecting names differing in terminations expressing gender and at the same time accepting other names differing by no greater margin (often by only one letter).

Thus under A. O. U. practise *Otostomus, Otostoma* and *Oto stomum* are treated as identical, while *Odostoma* and *Otostoma, Icteria* and *Icterias, Pica* and *Picus* are considered distinct. The fact that the latter words had different terminations, or different meanings in classical usage has nothing to do with the case. Nomenclature is not the Latin language; it is a mass of invented, adopted, derived and compounded words, some of which are in Latin form, others not, but all of which, nevertheless, have equal standing in the scientific world. Principle V of the A. O. U. Code, itself, asserts that

> A name is only a name, having no meaning until invested with one by being used as the handle of a fact; and the meaning of a name so used in zoological nomenclature, does not depend upon its signification in any other connection.

Literally construed this principle is fully in accord with the definition of scientific names as arbitrary combinations of letters, and it would seem unnecessary even to state with respect to arbitrary combinations, that we can only regard each different one (even if by only one letter) as a distinct name. It would seem clear, therefore, that in scientific nomenclature names are merely labels for conceptions; that their use demands precision, and with precision all names appreciably different can be used without confusion.

Small (even one-letter) differences in scientific names are by no means confined to terminations; they occur in all points in words. Consider: *Neothripa, Neothrips; Felicea, Felicia, Donatia, Donacia; Isotoma, Isosoma; Leptopora, Leptoprora; Mercera, Merciera; Teliocrinus, Teleiocrinus; Sciurus, Seiurus; Sus, Mus.* Consider also such a series of names as *Monocerus, Monocereus,*

Monocercus, Monocercis. These names all stand under the A. O. U. Code, as do also words like the following: *Rolanda, Rolandra; Oga, Ogoas; Orophia, Orophila; Menida, Menidia; Lyria, Lyrcia; Passerina, Passerita;* all of which differ only in the last few letters as do those with terminations denoting gender, and are equally liable to confusion by typographical errors.

What justification is there for accepting names so nearly alike as many of these but considering as homonyms such terms as *Nyctala* and *Nyctalus; Nettion* and *Nettium?* The aim of codes of nomenclature is to conserve names, not to make opportunities for the creation of new ones. But the A. O. U. custom of considering homonyms, names differing in terminations indicating gender is a breeder of new names. This is clearly shown by two notes[5] published in a recent number of *The Auk,* in which it is asserted that *Phœochroa* Gould 1861 is preoccupied by *Phœochrous* Laporte, 1840, and *Elminia* Bonaparte 1854 by *Elminius* King, 1831, and a new name is proposed in each case. The same criticism applies to certain other suggestions in connection with Canon XXX of the A. O. U. Code, namely those that would homonymize such words as *Athene* and *Athena; Contopus* and *Contipus.* Those who look with favor on homonymizing words whether they differ only by endings denoting gender, whether the root is taken from the Attic or other dialect, whether the connecting vowel of compound words be a, i, or o, or for other philological reasons should remember that there is no more reason for stopping at one point than another in the path of purism. Always there will be more and more advanced purists, who would sink generic names differing far more widely.[6] For instance, consider the following pairs of names for which it has actually been proposed that the second name in each couplet be regarded as homonym: *Callitriche, Calothrix; Myosuros, Myurus; Galarhoeus, Galactorheus; Korycarpus, Corythrocarpus; Ionactis, Iactis; Genyscoelus, Coelogenus.*

Philology is an interesting and important science, but what has classical purism to do with a hodge-podge of names such as zoological nomenclature now is, with names coined, with names classical, with those borrowed from nearly every language ancient and modern? What would be the fate of nomenclature if the purist were allowed to work his will with such names as: *Abudef-*

[5] *The Auk,* Vol. 37, No. 2, April, 1920, p. 295, and p. 302.

[6] A very few reject words of similar sound—phononyms.

duf, Avahi, Aye-aye, Bagre, Cachalot, Djabub, Grysbock, Jafar, Jukaruka, Kahavalu, Louti, Mabuya, Maki, Ompok, Potto, Sandat, Sheltopusik, Tlja, Susu, Wallago, Zingel and the like? Or with such personal and local derivatives as: *Amiskwia, Ernestokokenia, Ischikauia, Mitsukurina, Mordwilkoja, Schlaginhaufenia, Takakkawia, Wankowiczium, Wlassicsia and Zschokkeella?*

The writer does not defend the choice of such names, but once on record they are an integral part of nomenclature and an outburst of purism sufficient to do away with them will not occur. Whether we will or no, we are dealing with essentially arbitrary combinations of letters arbitrarily selected. The conglomeration of generic names in zoology, may be, nay is, subject to criticism, but it exists, is in use. It is part and parcel of the language of Science and classical purism can no more be applied to it than to any other modern language which is constantly growing, ever adding to itself terms from a multitude of sources.[7] A condition not a theory confronts us; practicability must reign and pedantry be forgotten.

Practically all rules relating to the validity and priority of generic names have some saving clause as "typographical errors corrected," or "except for obvious typographical errors." A common-sense application of such clauses would do away with the most vexatious cases of emendation, cases often cited to show the necessity of homonymizing similar generic names, namely those in which an author mis-spells names of his own establishing when using them subsequently to the original citation. In such cases why can we not take an author at his word; he intended to treat of the same group as before, and his emended name, whether intentional or not should be regarded as a synonym of the original. We do not recognize an author's efforts to change a published name, except to correct typographical errors. Why should we give any weight to emendations which themselves, in many if not most cases, are almost certainly typographical errors. The same rule should apply to names mis-spelled by others than the original author when it is clear they intended to refer to the same genus. The fact that the species included under such names are now considered to belong to different genera is of no consequence; these genera

[7] Thus we adopt into English but do not Anglify such words as hangar, machete, fez, mufti, a host of which could be cited.

should date from the time formally recognized and should bear the name then given. It is a travesty on priority to credit an author with conceptions he never entertained, and to use for them mis-spelled names for which he no doubt often had occasion to regret his inadvertence. In brief, regard all emendations as typographical errors unless there is definite evidence to the contrary. With the treatment suggested, such cases as *Pogonius, Pogonias, Pogonia* (a name spelled three ways in the same publication), and similar instances lose their troublesome aspect, and suggestions for homonymizing them, much of their force. The chief cause for anxiety in connection with the one-letter rule seems to be that numerous emendations may be revived, but it can confidently be asserted that, from a practical viewpoint, most emendations are clear synonyms from the beginning and their status would not be changed under the one-letter rule.

Moreover changes under this rule need be feared only in branches of zoology in which the practice advised by the A. O. U. Code has been followed, that is the study of birds and mammals. Certainly the one-letter rule has been used, since the adoption of the International Code, if not before, by most American students of animal parasites,[8] echinoderms, crustaceans, insects and fishes[9] and as shown in preceding paragraphs their practice[10] in this respect is overwhelmingly supported by the various zoological codes.

[8] See discussions by Ch. Wardell Stiles (*Zool. Jahrb.*, 15, 1902, pp. 172–175). "The difference of a single letter, entirely regardless of the etymology, excludes the possibility of the words being identical, hence excludes the possibility of their being homonyms" (pp. 172–173).

[9] See note in Jordan and Evermann, "The Fishes of North and Middle America," Vol. I, 1896, p. v, "We regard all generic names as different unless originally spelled alike."

[10] An attempt to develop what usage, in this respect, is followed in a larger number of zoological specialties, was made by mailing a brief questionnaire to 30 systematic zoologists. The questions asked were:

1. In your specialty have one-letter differences been regarded in recent years (at least since adoption of International Code) as sufficient to establish the distinctness and validity of generic names?

2. Or has the ruling of American Ornithologists' Union Code relating to homonymizing terms differing only in endings indicating gender, etc., been followed?

Only 17 replies were received, of which 2 were noncommital, 9 reported no established usage and those which indicated adherence to one or the other of the opposed practise numbered 3 in each case. The result of this mail test at least supports the writer's contention that the subject is one ripe for public discussion.

Since one-letter differences in generic names are sufficient in many cases as shown by citations in this article and the practise of nomenclators, why are they not in all? The one-letter rule is practicable, while one based on grounds of classical purism is not, and as the framers of the Ichthyological Code properly remark:

> If all names are regarded as different unless spelled alike, these matters offer no difficulty. Any other view gives no assurance of stability.

Finally, discarding names of independent origin and distinct application, that are not spelled identically, overthrows the law of priority and like all practises of that tendency (so long as the priority system is followed) is not for the lasting good of scientific nomenclature.

W. L. McATEE

U. S. BIOLOGICAL SURVEY